

performing reverse path forwarding using the multicast routing table.

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03 subject (Amended) 17. A computer program product, disposed on a computer readable medium, for multicast routing, the computer program including instructions for causing a computer to:

receive link state advertisements from routers in a network;

construct a multicast routing table and a unicast routing table from the received link state packets, the tables corresponding to a short path tree through multicast routers.

#### REMARKS

The above-identified patent application has been amended. Applicant requests reconsideration and re-examination.

The examiner rejected claims 1, 13, and 17 under 35 USC 103(a) as obvious by Crawley et al.; (US Patent 5,881,246).

As amended, claim 1 distinguishes over Crawley et al. Claim 1 recites, "construct a multicast routing table and a unicast routing table from the received link state packets, the tables corresponding to a short path tree through multicast routers". The references neither describe nor suggest constructing separate tables of identified multicast routers or unicast routers.

At Col. 1 lines 27-43, Crawley discusses Open Shortest Path First (OSPF), an example of a link-state routing protocol. Each router running the OSPF protocol maintains an identical database describing the network topology. Using this topology database, each router is able to generate a routing table by constructing a shortest-path tree.

Crawley's teachings are directed towards an area of uniform types of routers. Crawley's teachings are not directed towards dealing with the problems associated with multicast routers and unicast routers.

The examiner rejected claims 13, and 17 on the same rationale as used in claim 1. Claims 13 and 17 as amended are distinguished on the same grounds as previously discussed.

The examiner rejected claims 2-12, 15-16, and 18-22 under 35 USC 103(a) as obvious over by Crawley et al; (US Patent 5,881,246) in view of Haggery et al. (US Patent 6,331,983).

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Claims 2-7, 9-11, 15-16, 18-20, and 22 depend directly or indirectly from claims 1, 13, and 17 and are distinct at least for the reasons discussed therein. Moreover, the claims have additional distinguishing features.

The limitations of cancelled claims 8, 12, and 14 have been added to independent claims 1, 13, and 21.

Attached is a marked-up version of the changes being made by the current amendments.

Applicant respectfully requests reconsideration and allowance. Enclosed is a \$110 check for the Petition for Extension of Time fee. Please apply any other charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

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**Version with markings to show changes made**

**In the claims:**

Claims 1, 13, and 17 have been amended as follows:

(Amended) 1. A method of multicast routing, comprising:  
receiving link state advertisements from routers in a network; and  
constructing a multicast routing table and a unicast routing table from the received link state packets, the tables corresponding to a short path tree through multicast routers.

(Amended) 13. A method of multicast routing, comprising:  
receiving MOSPF (Multicast Open Short Path First) link state advertisements from routers in a network;  
constructing a multicast routing table and a unicast routing table from the received link state packets, the multicast routing table correlating addresses of destination multicast capable routers with addresses of multicast capable routers on a short path tree of multicast capable routers; and  
performing reverse path forwarding using the multicast routing table.

(Amended) 17. A computer program product, disposed on a computer readable medium, for multicast routing, the computer program including instructions for causing a computer to:  
receive link state advertisements from routers in a network;  
construct a multicast routing table and a unicast routing table from the received link state packets, the tables corresponding to a short path tree through multicast routers.